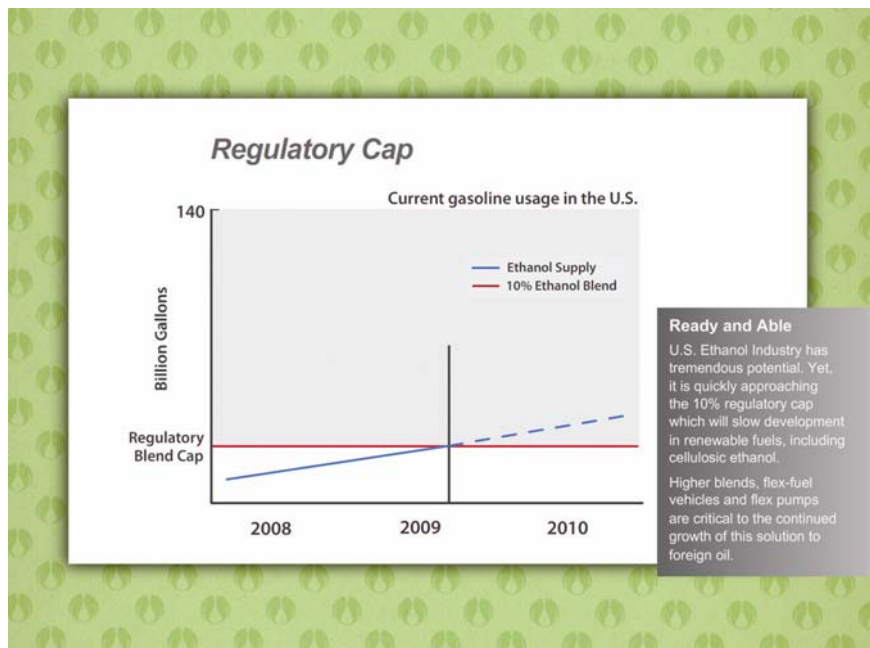


Green Jobs Waiver Fact Sheet

Today, Growth Energy submitted a waiver to the United States Environmental Protection Agency (EPA) to lift the arbitrary regulatory cap on ethanol from a 10 percent blend of ethanol to a 15 percent blend of ethanol in our gas supply. High-tech ethanol is cleaner and greener than ever before. Blending higher percentages of ethanol into our gas is a step we can take right now to create American jobs, increase our energy independence, and improve our environment. It would also ensure a market for the emerging cellulosic ethanol industry.

Background: Current Status of Ethanol in Our Fuel Supply

- More than 70 percent of the gas Americans use in vehicles today contains ethanol (American Coalition for Ethanol). Most vehicles use a blend of 10 percent ethanol and 90 percent gasoline, or E10.
- Current government regulations, which date back to the 1970s, limit the ethanol blend to E10. Ethanol producers have hit that cap, producing more ethanol than can be used under current restrictions. This prevents compliance with the Renewable Fuel Standard and threatens to block research and development into cellulosic and future generations of biofuels.
- In 2007, Congress mandated the use of 36 billion gallons of renewable fuel by 2022. For 2009, the mandate is 11.1 billion gallons.



Background: Waiver Submission Process

- Growth Energy sent two copies of the waiver to Administrator Lisa Jackson at the U.S. EPA and two copies to the Office of Transportation and Air Quality.
- The EPA's only role in determining the success of the waiver is to determine whether E15 would cause the failure of emission control systems, including catalytic converters, in vehicles. Extensive third-party research shows emission control systems are unaffected.
- EPA will review the application, solicit comments from the public, and make a final decision regarding the application within 270 days.
- EPA will formally request comments through notification in the Federal Register during the 270-day decision period.
- The length of the comment period and scope of requested comments will be set forth in the Federal Register notice.

E15 Fact: We will grow our economy and create American jobs by moving to E15.

- More than 136,000 new green-collar jobs will be created nationwide by moving to E15 (North Dakota State University).
- Ethanol production revitalizes our rural communities by creating high-paying jobs and investing in rural communities. These are jobs that can't be outsourced.
- Ethanol production reinvests money in the U.S. economy instead of sending dollars and jobs overseas. We'll be creating jobs in Des Moines rather than Abu Dhabi, and Sioux Falls rather than Saudi Arabia.

E15 Fact: We will achieve energy independence sooner with E15.

- By using E10 in much of its fuel today, the U.S. has reduced its dependence on foreign oil by billions of gallons each year. Based on 2007 U.S. gasoline consumption, increasing the blend level from E10 to E15 will avoid the importation of another seven billion gallons of gasoline.
- According to the Energy Information Administration, the U.S. imports 12 million barrels of oil per day, nearly 60 percent of the oil we consume (U.S. Department of Energy). Ethanol can replace more of that oil, helping us achieve greater energy independence, and keep more money and jobs here at home.

E15 Fact: We will make our gasoline cleaner and greener with E15.

- The latest research shows that ethanol produced from corn can reduce GHG emissions by as much as 59 percent relative to gasoline. Continued innovation in the ethanol industry can further reduce emissions by as much as 67 percent (University of Nebraska, Lincoln).
- Moving from our current E10 blend to E15 means we could reduce an additional 20 million metric tons of GHG emissions per year. That means using E15 instead of unleaded gasoline would reduce greenhouse gas emissions equal to removing 10.5 million vehicles from the road (Calculations based on BESS Model/EPA/DOE data).

E15 Fact: The arbitrary cap on ethanol is a roadblock to further investment in second generation biofuels, which will be even more beneficial for the environment and would create a new wave of green-collar job growth.

- Moving to E15 will ensure a market for the second generation of biofuels that promise to reduce GHG emissions by 86 percent compared to gasoline (Argonne National Laboratory, U.S. Department of Energy). Even though the RFS mandates 21 billion gallons of cellulosic ethanol, without moving to E15 there is no market for the product.
- Science is on the verge of breakthroughs in cellulosic ethanol that will allow it to be made from corn cobs, wood chips, and other plant materials as well as from corn.
- More than 300 million gallons of planned cellulosic ethanol production capacity is waiting to come online (Reuters, February 19, 2009), but is stalled because of a lack of an available market. If we don't increase the blend of ethanol in our gas to E15 soon, many of these projects will be cancelled or postponed.
- Biomass feedstock is available all over the country, which means there is the potential for green-collar job expansion into regions that do not yet produce ethanol.

E15 Fact: Research supporting use of E15 covers many areas: performance, emissions, compatibility with fuel infrastructure and more.

- The science overwhelmingly supports E15. In fact, there has been more testing of E15 than there has been of any other fuel additive in the history of the EPA waiver process.
- In the past two years, multiple comprehensive studies involving over 100 vehicles, 85 vehicle and engine types, and 33 fuel dispensing units have been completed to evaluate the affects of ethanol-gasoline blends above 10 percent ethanol, from E15 to E85. These studies include a year-long drivability test and over 5,500 hours of materials compatibility testing.
- Significant research shows that vehicle emissions and emission control equipment are not impacted by E15.

- Research for the Department of Energy concluded that when E15 was compared to traditional gasoline, there were no significant changes in vehicle tailpipe emissions or vehicle drivability as ethanol content increased (Oak Ridge National Laboratory, U.S. Department of Energy).
 - A report prepared by the Energy & Environmental Research Center and Minnesota Center for Automotive Research studied the effects of E10 to E85 on vehicles and found that exhaust emissions levels for all vehicles at all levels of ethanol blend were within Clean Air Act standards (Minnesota Center for Automotive Research).
 - The Rochester Institute of Technology evaluated effects of E20 on 10 legacy vehicles and results after 75,000 collective miles driven found no fuel-related failures or significant vehicle problems and documented reductions in regulated tailpipe emissions when using E20 (Rochester Institute of Technology).
- Recent studies also support that E15 results in no difference in drivability compared to gasoline. A recent Minnesota Drivability Study presents data to support that E15 will cause no drivability issues and will not lead to “removal or rendering inoperative of [emissions] devices or systems” based on negative impacts on performance (State of Minnesota).
 - E15 won’t harm your engine, and, in fact, it may even be beneficial to your vehicle. A recent study by the University of North Dakota found that the three non-flex fuel vehicles tested obtained greater fuel economy at higher blends of ethanol than unleaded gasoline (University of North Dakota).
 - E15 can be used in existing fuel infrastructure without risk of damage or safety concerns. Underwriters Laboratories (UL) recently announced that its research supports the use of fuel blends containing 15 percent ethanol at America's gas station pumps.